

July 2004

Leading Edge



Air Force Materiel Command



Home from Hanoi

Former POW repatriates fallen comrades

page 8

LEADING EDGE

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Tail and all

ROBINS AIR FORCE BASE, Ga. — The Warner Robins Air Logistics Center Maintenance Directorate can now provide more support to C-17 Globemaster aircraft since installing new hangar doors on the building formerly used for C-141 work.

The doors allow for the taller tail of the C-17 as opposed to the C-141, making it possible to fit the entire aircraft inside the hangar and protect it from the outdoor elements.

"We did a study several years back that looked at several hangars on base with the potential of putting C-17s in them," said Mr. Bill Deaver with the 778th Civil Engineer Squadron. The requirements were that it had a wide enough door to accommodate the wing tip clearances, and primarily, it would have a door-opening height to accommodate the 55-foot tail of the C-17. The tail of the C-141 was only 41 feet tall.

"This will allow us to do the full range of maintenance on (the C-17)," said Mr. Mark Johnson, chief of the C-17 production branch. "There's a significant amount of landing gear work that will be coming



C-17 Globemaster at Warner Robins Air Logistics Center, Robins AFB, Ga. (AF photo by Sue Sapp)

up in the very near future. With the enclosed dock position, we can bring the airplane in, up-jack it, do the landing gear work and not have to worry about the wind factor."

Prior to installing the doors, a C-17 tail stuck out of the hangar, and crews of six

would spend 30 minutes jacking up the plane and another 30 minutes letting it down daily. Now crews will be able to bring the aircraft in and leave it jacked for an indefinite period of time.

— WR-ALC Public Affairs

The critical 'link'

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Warriors in future conflicts will see United States and coalition nations sharing more of the battlefield load thanks to U.S. and allied countries' F-16 fighters getting an upgraded software program.

The U.S. version of the software, known as M3.3A+, underwent large-force operational testing at Red Flag at Nellis Air Force Base, Nev. Test pilots taking part in this large-scale aerial combat exercise were networked through M3.3A+ with a new tactical data link system known as Link 16.

The software upgrade was then turned over to Air Combat Command for final operational field testing at Eglin AFB, Fla., and Nellis AFB.

As U.S. aircraft are fitted with the new core software, data links and other subsystems, a number of European allies' F-16s are undergoing a scheduled upgrade

with similar, compatible capabilities, said Col. Mike Williams, F-16 system program director at Wright-Patterson AFB.

"These capabilities allow us to fight and win overwhelmingly on the battlefield," Colonel Williams said. "What's also great about this is that our unique multi-national development program means the United States and our allies get this advanced technology and share in the cost of all the development work."

With 1,360 F-16s comprising 54 percent of the U.S. Air Force's fighter inventory, and nearly 2,000 more being flown by or produced for other friendly nations today, such commonality means that future coalition warfare will be more integrated than ever before. Colonel Williams said coalition members fielding these F-16s will be full, combat-capable members of the team and can share much more of the war-fighting burden.

— ASC Public Affairs

Communication Warfare

HANSCOM AIR FORCE BASE, Mass. — With the conclusion of Joint Expeditionary Force Experiment Spiral 3, the stage is now set for the largest battle management command and control experiment ever.

JEFX '04, the Air Force's premier experimental venue for groundbreaking command and control technology and processes, is scheduled for July 19 to Aug. 6. It involves forces at bases across the United States and includes the United Kingdom, Australia and Canada.

The experiment encompasses the entire command and control constellation. One large portion centers on the experimental Combined Air Operations Center at Nellis Air Force Base, Nev., which was designed and built by personnel from the Electronic Systems Center, Hanscom AFB, Mass.

Innovations from JEFX '04 are expected to arrive in the field during the next six to 18 months.

— ESC Public Affairs

Around the command
☆☆☆☆ Gen. Gregory S. Martin



RESOURCE EARNING UNITS

redefining AFMC organizations

Every day the men and women of the Air Force Materiel Command do whatever it takes to deliver war-winning technology, acquisition support and sustainment capabilities to warfighters around the world to support the Global War on Terrorism. I am very proud of what you do and honored to serve as your commander.

You, the outstanding people of AFMC, represent the key ingredient to our unprecedented success. But if you take a look at AFMC from a manning perspective since its inception in 1992, you will see that we have reduced our work force by nearly half — with no end in sight.

We need to ensure we have the right number of people to perform our mission, but that's a big challenge in AFMC because we have relatively few objective methods or models in place to size organizations like our system program offices or SPOs.

If you have limited means to objectively determine the number of people or other resources you need, then it becomes difficult to defend against reductions in those resources.

The way to win this circular argument is to implement the Resource Earning Unit or REU approach.

A "unit" is defined as an individual or combination of discrete weapon systems, products or services. "Resources" are what's required to support an activity. These units "earn" the resources required to support them in the same manner flying squadrons earn resources within the Air Force corporate structure today.

Let's consider a real-life example.

When the Air Force activates an F-15 squadron, that squadron comes with a set number of resources — primary and back-up aircraft, pilots based on established aircrew ratios, maintainers based on maintenance hours per flying hour, test equipment and other maintenance supplies, war-readiness material and spares, and Operations & Maintenance funding to cover costs per flying hour.

The "REU Model" for an F-15 squadron comes as a result of attrition-based planning, historical and accepted manpower and resource models, and table of allowances showing exactly what it takes to fly fighter aircraft and run a flying squadron. There's no magic.

If you look across a wide variety of world-class weapons platforms and their diverse missions, you'll begin to see that while the attrition-based REU Model is applicable, the level of resources provided varies based on the diversity of the mission and the history of the specific weapon system.

In other words, resources for an F-16 squadron, A-10 squadron, C-17 squadron, and space warning squadron all differ from the F-15 squadron used in our example.

Now back to the F-15 squadron. For the F-15 weapon system, just as for every other Air Force weapon system, AFMC operates a SPO to manage the F-15 throughout its lifecycle. However, unlike the F-15 squadron, the F-15 SPO has no REU Model to

"We need to ensure we have the right number of people to perform our mission, but that's a big challenge in AFMC because we have relatively few objective methods or models in place to size organizations like our system program offices or SPOs. If you have limited means to objectively determine the number of people or other resources you need, then it becomes difficult to defend against reductions in those resources. The way to win this circular argument is to implement the Resource Earning Unit or REU approach."

determine the resources it needs to fulfill its mission. None of our SPOs have such a model, making it impossible to determine a SPO's true resource baseline.

Just as the level of funding and personnel vary between different weapon systems, so does the level of funding and personnel for the respective SPOs. We need to wrap our arms around this problem.

Let me explain what we've done so far to apply REU Model thinking to create a SPO Composite Model (SPOCOM).

- w Identified Air Force Manpower Standards that apply to portions of the SPOs
- w Developed an initial manpower equation using the Product Support Resource Model or PSRM
- w Developed a schedule to beta test improved model efforts
- w Developed a draft concept of operations

SPOCOM is intended to transform our SPOs into Resource Earning Units so we can properly staff them and curb the reduction of our most valued asset — people.

Special note from HQ AFMC/XPM:

The Air Force is converting its manpower standards into Capability Manpower Models and Capability-Based Manpower Determinants. This change is a long-term solution to facilitate capabilities-based planning, but you should be aware of ongoing changes in the tools used to determine how you earn your manpower.



Unlike F-15 squadrons, such as those of the 4th Fighter Wing from Seymour-Johnson AFB, N.C. (pictured here at Tinker AFB, Okla.), the F-15 SPO currently has not used a Resource Earning Unit model to determine the resources it needs to fulfill its mission. AFMC is transforming its SPOs into Resource Earning Units to properly staff them and curb the reduction of the command's most valuable asset — its people. (AF photo by Eddie Edge)

Jerita Kreuzberg, a sheet metal mechanic at Oklahoma City Air Logistics Center, Tinker AFB, Okla., works on the wing of a B-52 Stratofortress undergoing programmed depot maintenance. (AF photo by Margo Wright)



Moving 'em out

AFMC loggies keep weapon systems in the fight

In the global war on terrorism, Air Force fighter, tanker and cargo aircraft are flying 200 to 250 sorties per day average, tasking mechanical functions to the extreme. Crew chiefs and unit-level maintainers know certain maintenance, that's beyond their scope, is needed to keep Air Force aircraft, engines, spare parts and munitions operating at full capacity.

That's where Air Force Materiel Command's three air logistics centers and the Aerospace Maintenance and Regeneration Center come into play.

The 22,220 military and civilian workers that make up these entities provide scheduled and unscheduled repair and overhaul for airframes and engines based on a planned timetable or cycle time for each weapon system, according to Col. Eugene Collins, AFMC depot maintenance division chief. They also repair any of 36,000 individual repairable spare parts

routed from the field. Missiles and ground electronic systems are repaired through depot maintenance as well.

AFMC depot workers can also develop or modify software used to operate weapon systems, as well as software designed for diagnostic purposes, the colonel said. Finally, they store and regenerate aircraft for all military services at the Aerospace Maintenance and Regeneration Center at Davis-Monthan Air Force Base, Ariz., for equipment active forces currently do not need.

ALC and AMARC workers directly or indirectly benefit Air Force warfighters as well as those from other U.S. service components and international countries. And current world situations seem to indicate business will keep steady.

"Since 1990 the Air Force has been involved in significant and continuous engagements from Desert Storm to Afghanistan," Colonel Collins said. "As

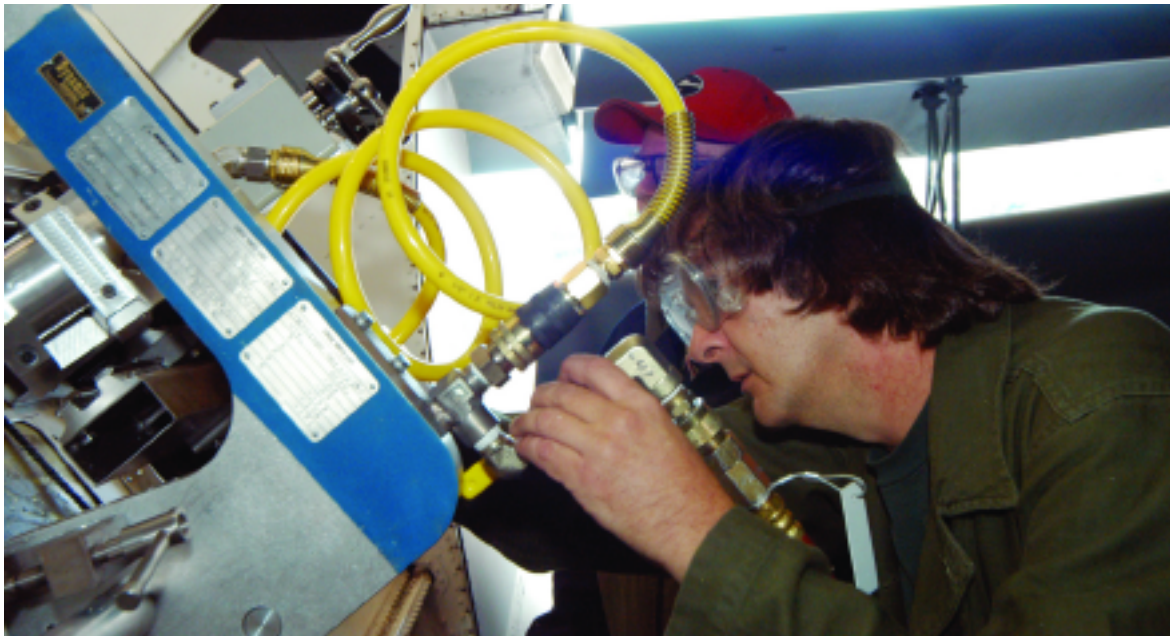
Tech. Sgt. Carl Norman
AFMC Public Affairs

the national military strategy evolves to meet new threats, the role of the Air Force changes to meet those challenges. Our ALCs and AMARC are vital to the Air Force's ability to rapidly project, sustain and redeploy aerospace power around the globe to accomplish that mission."

Recognizing the criticality of that role, Colonel Collins said AFMC has overhauled the way they do business and today its air logistics centers are reaping the rewards.

For instance, he said in 2001 AFMC maintainers provided about 64.5 percent of their expected depot maintenance and spare engine work back to the owning units on time. By implementing Lean production improvement principles, supporting shop floor workers and applying more back-to-basics logical thinking in how things are done, 92.6 percent of AFMC's products are returned to the warfighters on time today.

Jim Woodard, foreground, and John Reynolds, sheet metal mechanics at Warner Robins Logistics Center, Robins AFB, Ga., mill a frame on a C-17 Globemaster. Robins' primary C-17 work includes time compliance technical orders, modifications, analytical condition inspections and home station checks. (AF photo by Sue Sapp)



Debora Meredith, AFMC depot maintenance deputy division chief, said there are more Air Force tanker aircraft in the air at any one time now than ever before thanks to workers at the Oklahoma City Air Logistics Center, Tinker AFB, Okla., cutting the aircraft's programmed depot maintenance time in half. It takes 215 days today versus 400 in years past. They also have more spare fighter aircraft engines available for maintainers around the globe than any time in the past decade.

Down the road at the Ogden Air Logistics Center, Hill AFB, Utah, workers on the A-10 aircraft repair line reduced flowdays 80 percent in the wing shop. And it now takes only two weeks versus two months for airborne generator repairs there. That saved the Air Force \$1.7 million in overtime costs and reduced down-for-maintenance rates for those parts by 40 percent.

At Warner Robins Air Logistics Center, Robins AFB, Ga., workers reduced C-5 Galaxy programmed depot maintenance flowdays by more than two months — from 339 to 268 days. And by reorganizing work space, their mechanics travel 108 hours less to get parts and tools, Ms. Meredith said.

"2003 was a banner year for the Air Force Materiel Command's depot maintenance community," Colonel Collins added. "Our organic workforce produced 696 aircraft — six more than our goal; we produced 475 engines — surpassing our goal by 31; and our production hours of

nearly 23.5 million exceeded our plan by some 1.4 million hours."

Additionally, he said depot maintenance quality defect rates fell well within established goals and the \$5.1 billion in actual FY03 depot maintenance organic revenue exceeded the planned \$4.2 billion by some 22 percent.

"AFMC's improved efficiency has netted us more aircraft ... with which to fight the global war on terrorism."

Brig. Gen. Loren Reno Air Mobility Command

"These accomplishments translate into truly outstanding support to the warfighter," said Brig. Gen. Gary McCoy, AFMC logistics director.

And Brig. Gen. Loren Reno, Air Mobility Command logistics director, agrees.

"To be sure, AFMC's improved efficiency has netted us more aircraft, old and tired though they are, with which to fight the global war on terrorism," he said.

AFMC leaders are proud of these successes, but the improvement journey has just begun, according to Debra Walker, AFMC depot maintenance deputy director.

"We're going to continue our efforts to

reduce the cost of sustaining and producing airplanes through more Lean improvements and activities," Mrs. Walker said. "We're in a heightened culture for process improvement and reaping huge benefits internally and for our customers everywhere."

So what does the future hold for AFMC's air logistics centers? According to a letter from Gen. Gregory S. Martin, AFMC commander, it's responding to Air Force needs and technology advances.

"This command is pursuing new approaches toward enhancing readiness," General Martin said. "AFMC has supply and depot maintenance transformation initiatives underway: Purchasing and Supply Chain Management aims to fundamentally change the way we do purchasing and supply for the Air Force; and Depot Maintenance Transformation is implementing 'Lean' approaches to improve and integrate both shop floor and product support processes. Together, PSCM and DMT transformations represent revolutionary changes in the way AFMC provides sustainment support for the Air Force."

"It's a great time to be a member of Air Force Materiel Command and especially, the depot maintenance and supply team," Colonel Collins said. "We are achieving record outcomes in some areas and delighting our customers who have patiently stuck by us as we transformed our operations to deliver their war-making assets back to their hands on schedule, at or below planned cost, and with few or no defects."

Wearing the distinctive shoulder patch designed for the crewmembers who journeyed to Hanoi, Vietnam, on May 28, 2004, Maj. Gen. Ed Mechenbier prepares to talk to news media at Hickam AFB, Hawaii, following a formal MIA repatriation ceremony on June 2. The general, himself a Vietnam POW for nearly six years, lead a mission to Hanoi to retrieve the remains of two American MIAs and return them to U.S. soil. It was General Mechenbier's first trip back to Vietnam since his release on February 18, 1973. (AF photo by John Klemack)

Final flight to freedom

John Klemack
AFMC Public Affairs

One cannot imagine the thoughts and emotions that poured through Maj. Gen. Edward J. Mechenbier as he stood once again on the ground in Vietnam.

It was 9 o'clock in the morning on Friday, May 28, 2004. Scanning the sparse landscape with a look that combined wonder, awe and a slight hint of apprehension, the general stepped slowly from his C-141 onto the ramp at Hanoi's Noi Bai International Airport.



Specially selected and trained members of the multi-service Joint POW/MIA Accounting Command Honor Guard drape an American flag over an aluminum transfer case containing the remains of a U.S. MIA from the Vietnam War. MIA remains were given high military honors during the formal transfer ceremony at Hanoi's Noi Bai International Airport, Vietnam, on June 28, 2004. (AF photo by Master Sgt. Ken Wright)

He stopped for a moment and squinted into the glare of a heavily overcast tropical sky. It was hot — very hot — stifling and oppressive.

But it was the lack of any breeze coupled with the near one hundred percent humidity that made General Mechenbier and his crew feel as though they had just stepped into a steam bath with the thermostat set in the red zone.

The general talked about that moment: “When we stepped off the airplane onto the tarmac in Hanoi — you know, they always say that sounds, sights, smells take you back — instantly, it was the humidity! I said, ‘I’ve been here before!’ And I looked around and it was like I was there yesterday!”

But the last time he was in Vietnam, he was half his current age, and the heartrending conflict that had ravaged that Southeast Asian country for more than a decade was on the very cusp of drawing to a close.

In February of 1973, U.S. troops were coming home. America’s prisoners of war were being released and repatriated. Among them was 30-year-old 1st Lt. Ed Mechenbier who, nearly six years earlier, had become a POW, a captive of the North Vietnamese. But on that day of his

release, there was a bittersweet element to his guarded optimism.

Lt. Mechenbier and many of his fellow POWs suspected their announced release by their Vietnamese captors was possibly a hoax. Though their freedom was soon to be very real indeed, it is likely as well that many of them wondered about the fate of fellow U.S. soldiers, sailors, Airmen and Marines listed as missing in action. And sadly, the fate of hundreds, even thousands, of those unaccounted-for comrades-in-arms would remain a mystery and a source of national anxiety for decades to come.

The day of his release from the infamous Hanoi Hilton prison camp was February 18, 1973. Nearly nine years later, then Lt. Col. Mechenbier gave an oral history interview to the Association of Graduates of the U.S. Air Force Academy. He described the minutes immediately preceding his release. He and the 19 other POWs scheduled for release that day were skeptical. Their captors had “been nice” to them in the past, but only to attempt to trick the POWs into giving up information.

In the ‘91 interview at the Academy, Colonel Mechenbier said the senior ranking American officer “... came over to the

room where the 20 of us were and individually, he said, ‘I am giving you a direct order, and I take responsibility. You are going home today.’ He said that to each one of us.

“We said, ‘Fine. We still don’t necessarily believe this. If we see one camera ... see any indication at all that this is a propaganda thing, we are turning around and walking back into the prison.’

“We went outside. There were lots of Vietnamese, no cameras, no nothing. We got on the Vietnamese buses ... and they drove us out to Gia Lam Airport ... we could see a C-141 landing. I tell you — I’m not going to cry here — but it is going to get emotional. That’s a pretty sight.” Soon after boarding that “pretty sight,” the 20 POWs flew to Clark Air Base, Philippines.

Referring to their repatriation more than three decades ago, the general said, “When the airplane broke ground, that’s when we knew we were free, and we cheered like crazy!” They cheered again when they left Vietnamese air space.

“(We thought) okay, now they can’t make us turn around ... now we’re outta here, now we’re bookin’! Those were the two defining moments. That’s when we knew it was for real.”



Each time an MIA repatriation ceremony is conducted at Hickam AFB, Hawaii, hundreds of veterans, active duty and Reserve members from all military branches, their families, civilian government employees, and local community members turn out to show their respect and render honors. Here, Navy Lt. Commander Walt Morgan salutes during the playing of the National Anthem at the June 2, 2004, ceremony. (AF photo by Master Sgt. Ken Wright)

The aircraft that flew him and other POWs from Clark to Hickam Air Force Base, Hawaii, and then to Travis AFB, Calif., was the now-famous “Hanoi Taxi,” a C-141 Starlifter, tail number 60177.

Since its first flight into Gia Lam Airport to ferry released American POWs to Clark, on February 12, 1973, it has continued to serve gallantly throughout the world. It is currently assigned to the 445th Airlift Wing, an Air Force Reserve unit based at Wright-Patterson AFB, Ohio.

The Hanoi Taxi soon will retire from active service and will be enshrined in the United States Air Force Museum near Wright-Patterson AFB. Since its first historic flight in 1973, where it earned its nickname, tail number 60177 has been employed in many operations, but none more significant, perhaps, than its recent return to Hanoi.

In ‘73, it flew the first American POWs back to the USA. In ‘04, it went back to Vietnam with one of those POWs at the controls to repatriate the remains of two American servicemen who had been listed as Missing In Action for more than three decades.

During the approach to Noi Bai International, the general concentrated on flying the airplane. At the same time, he looked side-to-side, peering constantly at the Vietnam coastline and countryside below.

When not communicating with air traffic controllers, and possibly as a mechanism to mask his emotions, he spoke rapidly to the others on the flight deck, pointing out all-too-familiar landmarks: “Thud

Ridge” ... “Phantom Ridge” ... the serpentine curves of the Red River. Though it had been 37 years since his last flight over Vietnam, he recalled the terrain’s features easily. After all, it was his 113th combat mission — the eightieth “over the North” — the day his F-4 Phantom was set ablaze by an aerial flak barrage, forcing him and his back-seater to eject — and then to be taken prisoner. On that fateful day, they had successfully completed their mission, dropping their full ordnance load on the target, the Vu Chu Railroad Yards located about 30 miles northeast of Hanoi. True to his training, his total focus had been on the mission.

His focus was also on the mission on the morning of May 28, 2004. “The primary purpose of the mission was not to culminate my Air Force career. It was to contribute to the MIA repatriation mis-

sion. My being allowed to fly this mission, along with a fabulous crew from the 445th Airlift Wing, was a humbling experience.

“To me there is no more important assignment than to participate in bringing home our MIAs, from whatever battlefield they have consecrated by sacrificing their lives in service to their country. And I’m proud of the men and women of the Joint POW/MIA Accounting Command. Their motto says it all: Until They Are Home.”

Throughout the 14-day operation — Ohio to California to Hawaii to Guam to Thailand to Vietnam and back — the general’s message did not waver. “We were the lucky ones — those of us who came back alive. The time, talent and resources we devote to repatriating our MIAs tells the world that we care about our people. That somehow we can bring closure to families who have waited and wondered all these years about their loved ones’ fate is an honor, a privilege and is personally very gratifying because we are backing up what it says on the POW/MIA flag — You Are Not Forgotten.”

(Maj. Gen. Ed Mechenbier retired on June 30, after four years at the Air Force Academy plus 40 years as a commissioned officer in the Air Force, Ohio Air National Guard and Air Force Reserve. He was the last Vietnam POW still serving and the oldest Air Force pilot still flying. His last assignment was as the mobilization assistant to the commander, Headquarters Air Force Materiel Command, Wright-Patterson AFB, Ohio. He maintained flight currency with the Air Force Reserve Command’s 445th Airlift Wing, also based at Wright-Patterson.)

During the formal MIA repatriation ceremony conducted at Hickam AFB, Hawaii, June 2, 2004, members of the Joint POW/MIA Accounting Command Honor Guard carefully place transfer cases containing the remains of MIAs from the Vietnam and Korean Wars aboard specially-configured buses. (AF photo by Master Sgt. Ken Wright)



KC-135s get nose jobs

Maj. Rich Curry
507th Air Refueling Wing Public Affairs

Within the next three years, 495 C/KC-135 aircraft are going to receive nose jobs, but it's not out of vanity. According to the C/KC-135 Systems Program Office, the 45-year-old plus aircraft will receive new NORDAM Weather Master compressed foam core units as organizational-level maintenance personnel replace the existing radomes.

The measure is expected to save the Air Force nearly \$30 million.

The Air Force Reserve's 507th Air Refueling Wing, Tinker Air Force Base, Okla., provided one of its KC-135R Stratotankers last fall to support the final test proof and verify the Time Compliance Technical Order instructions.

According to Ron Hopkins, C/KC-135 structural engineer, the new radome was chosen because of its high-impact resistance and resistance to moisture intrusion. The new radome is 10 pounds lighter and easier to repair. It consists of a foam core sandwiched between inner and outer fiberglass plies. Mr. Hopkins estimates the meantime between failures for the new radome is projected at 17,241 hours versus 1,689 hours on the existing honeycomb.

Current honeycomb radomes are failing and being condemned at a high rate partly due to separation of the radome layers.

"Moisture was entering the edge of the older radome where it would freeze and expand at flying altitudes causing disjointing of the radome materials," Mr. Hopkins said.

Radomes will initially be issued as a TCTO modification kit to the customer. According to Mr. Hopkins, the new radome assembly kit would apply to a majority of the C/KC-135 aircraft currently being flown with the exception of the KC-135D/E aircraft that are pending retirement.


According to Senior Master Sgt. Robert Erickson, 507th Maintenance Group's Quality Assurance noncommissioned officer in charge, the actual installation of the radome takes four hours to complete.

"It's great to know that our unit can help improve the readiness of the entire fleet of KC-135s."

The 507th ARW has supported several other Tinker AFB depot projects in the past, Erickson added.

Installation of the new foam core radome is a Reduction of Total Ownership Cost initiative with a projected savings of \$29.6 million over the life of the C/KC-135 weapons system. TCTO, 1C-135-1616, is anticipated to hit the field sometime this spring.

The projected replacement of radomes should be complete by early 2005.



Air Force Reserve Airman 1st Class Ron Arredondo visually inspects a new Weather Master radome installed on a 507th Air Refueling Wing KC-135R Stratotanker at Tinker AFB, Okla. Airman Arredondo was part of the team supporting the Oklahoma-City Air Logistics Center's fit test and final Time Compliance Technical Order installation kit proof for the new radome. (AF photo by Maj. Rich Curry)



AFMC saves green with

Ron Scharven
AFMC Public Affairs

earth-friendly programs

“We lead the Air Force in the number of environmental cleanup remedies in place and sites closed,” said Darrin Wray, chief of environmental programs at Headquarters, Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio.

That’s the comment Mr. Wray made during an interview about the state of the environmental restoration program throughout the command.

“We are doing great,” he said, “in fact we are ahead of most of the Air Force in attaining closure of the environmental restoration sites within the command.”

According to Mr. Wray, AFMC has about 1,000 restoration sites and about 1,150 areas of concern for about 2,150 total.

“An AOC is when restoration folks have discovered that environmental contamination may be present at a certain location, but investigation work has not been performed. After the investigations are complete, the AOC will either be closed or changed to a site that will go through the complete restoration process,” Mr. Wray explained. “The command’s 2,150 sites and AOCs comprise about one-third of the total Air Force inventory. There are only about 6,500 sites and AOCs throughout the entire Air Force.”

Although it would seem that the air logistics centers would have the most restoration sites, they are pretty much divided equally between the command’s 16 product centers, test centers, research and technology centers, ALCs and specialized centers.

“In fact, the test center at Edwards Air Force Base, Calif., has the most sites, more than 400,” Mr. Wray declared.

One of the major changes to the environmental program is adopting the Environmental Management System. Executive Order 13148, “Greening the Government Through Leadership in Environmental Management,” requires three actions. First, that by December 31, 2005, each federal agency shall implement an environmental management system at all appropriate agency facilities based on facility size, complexity and the environmental aspects of facility operations.

Second, environmental management systems shall include measurable environmental goals, objectives and targets that are reviewed and updated annually. And third, once established, environmental management system performance measures shall be incorporated in agency audit protocols.

“EMS is the DoD and Air Force’s implementation of the ISO 14000 process developed by the International Organization for Standardization of continual improvement of plan, do, check and



Edwards AFB, Calif., won the Champion of Green Government award from the Environmental Protection Agency for an environmentally-friendly landscape demonstration project that is drought-tolerant and saves money. A design team from environmental management removed 5,000 square feet of lawn and replaced it with landscaping that will save about 227,000 gallons of water, eliminate 342 pounds of air pollutants from lawn-care equipment, reduce fertilizer use by 10 pounds and cut the amount of grass clippings collected by nearly 6,000 pounds. Cost savings per year are anticipated to be \$4,800. (AF photo)

mental sites closed or with cleanup systems in place and working by 2014,” Mr. Wray said. “Robins is scheduled to have final remedies in place at their sites by 2005, Tinker by 2008 and Hill by 2010.”

Environmental cleanup technology is always changing and AFMC stays in touch with the changing technologies.

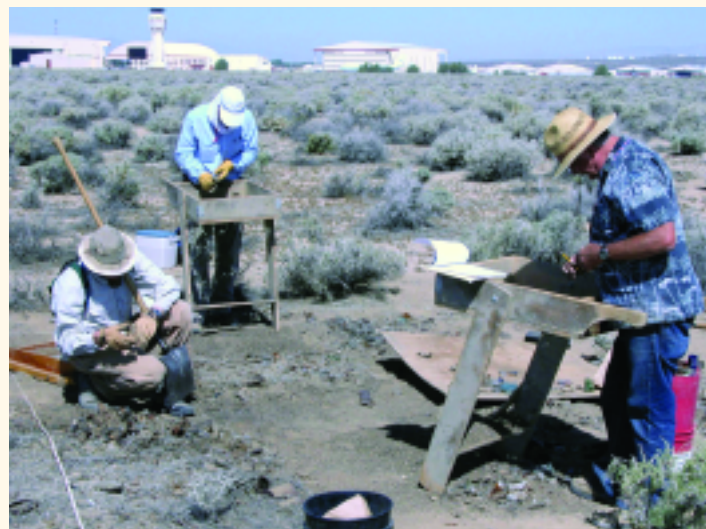
“Our Records of Decision for site closure uses the most current and effective technology available,” Mr. Wray explained, “but we review technologies in place every five years. If there is a better cleanup technology available, we’ll change to that better technology.”

AFMC receives about 30 percent of the Air Force’s budget for environmental restoration, and that is divided among AFMC installations.

“There are 11 people in the environmental programs branch with half dealing with restoration and the rest dealing with environmental funding,” Mr. Wray said. “The program managers keep on top of the programs at each base through the Air Force Restoration Information Management System or AFRIMS for short. AFRIMS is updated by each base by the 10th of each month and peer review committees look at what each base is doing and the technologies used.”

“Our goal is very simple,” Mr. Wray said, “to have all the sites cleaned up and for us to be out of business.”

Part of environmental management involves preserving historical information and sites. Archaeologists are pictured here excavating the Muroc town site near the Edwards AFB, Calif., flightline in preparation for a new runway. The town was established in 1883 as a railroad stop and was acquired by the Air Force in 1953. Cultural resource specialists are investigating the town’s ruins to provide new information about the lifestyles of early homesteaders. (AF photo)



act,” explained Tom Ellingson, chief of the environmental operations branch for the command.

“EMS looks for targets of opportunity by identifying environmental ‘aspects,’ which are basically any opportunity to fail. Any place there is a regulatory permit or we are emitting something into the air, land or water, we prioritize those ‘aspects’ and target them for process improvement,” Mr. Ellingson said.

“An EMS plan is in draft stage at the Air Staff that will determine how the Air Force will implement EMS,” Mr. Ellingson explained. “AFMC will issue supplemental guidance where we see it as necessary.”

Mr. Ellingson said that EMS will be a benefit to the environmental community in that it will help the command better manage its environmental programs.

“We feel that AFMC already has most of the components of EMS in place,” he continued. “On a macro scale, we have the components, but it’s just that we haven’t done it in the codified way the Air Force procedures will dictate, and will clearly lay out some procedures on how we, as an Air Force, can have more consistent environmental programs. In AFMC, we see it as a minor shift since we are doing most of these things already.”

The bases have already been given Air Force EMS implementation guidance which directs them to prepare prioritized lists of aspects, but according to Mr. Ellingson, it’s still going to be difficult to establish a single way of addressing these prioritized aspects.

“It has to come down to each installation’s environmental, safety and occupational health management structure to determine which aspect is their top priority, he said.

“Their priorities may differ from the top priority according to the Air Force algorithm. There may be local situations that drive a lower priority aspect to the top of the list which means there will have to be some flexibility in the plan.”

“The EMS will be a definite benefit for the restoration program to help us reach the Air Force goal of having all environ-



As system testing continues, the Airborne Laser is one step closer to an actual laser test.

The ABL aircraft is a highly-modified 747-400 airframe equipped with sensors, lasers and sophisticated optics to locate, track and destroy ballistic missiles.

Another phase of the project was successfully completed during a series of tests at Edwards Air Force Base, Calif., on the laser ejector systems that pull laser exhaust from ABL modules, creating the right conditions for lasing.

During the ground-based test series, on-board steam ejector systems successfully started the modules, which were flowing with an inert exhaust composed of helium, nitrogen and steam.

This exhaust, or effluent, was collected into the Systems Integration Laboratory's ground-based vacuum sphere, explained Kevin Montoya, ABL Integrated Test Force deputy director.

"The collection sphere, also known as the Ground Pressure Recovery Assembly, simulates the atmospheric conditions at ABL operating altitude," said Mr. Montoya. "The effluent, which is steam with some residual salts from the laser, is vented into the collection sphere, condensing in a collection basin. Finally, the collection basin is drained and the salty water is transported to the IMF [integrated mixing facility] for disposal."

The six laser modules are designed to operate using basic hydrogen peroxide fuel, and when this fuel is combined with chlorine gas and iodine, the energy generated from the reaction causes the laser beam, said Mr. Montoya.

However, during the ground tests, inert gases were substituted to ensure the ejectors operated safely before introducing the actual hydrogen peroxide fuel, he added.

After pulling the exhaust from the ABL modules, the ejector systems are designed to push the fumes out of the YAL-1A aircraft while flying at high speeds, said Lt. Col. Jim Rothenflue, 452nd Flight Test Squadron ABL director of engineering.

Chemicals are contained in the Facility Security Safety Monitoring System, and the types of chemicals contained in the facility include: chlorine, iodine, ammonia, hydrogen peroxide and three types of metal hydroxides, said Colonel Rothenflue.

Operating under the overall management of the Missile Defense Agency, the ITF team, consisting of Air Force, Boeing, Northrop Grumman Space Technology and Lockheed Martin people, will continue the test process that will ultimately lead to actual laser testing.

LASER

countdown continues

2nd Lt. Brooke Davis
AFFTC Public Affairs



Tina R. Barton

AEDC Public Affairs

DEEP FREEZE

Trent 900 Airbus engine completes \$11 million AEDC test program

Jeremy Galland, Rolls-Royce fitter, checks instrumentation on the Trent 900 engine for testing in AEDC's Aeropropulsion Test Facility C-2. The engine, selected as a powerplant for the Airbus A380 passenger aircraft, underwent engine operability and performance and icing testing in C-2. (AF photo by Gary Barton)

A crew at Arnold Engineering Development Center, Arnold Air Force Base, Tenn., literally tried to freeze up the largest diameter engine to ever visit the base — the Rolls-Royce Trent 900, which powers the Airbus A380 passenger aircraft.

This was done during an icing test to ensure the 70,000-pound-thrust engine could shed ice that builds up during flight and could resist or tolerate any damage from the icing condition, said AEDC Project Manager Dave Duesterhaus.

The Trent 900 is more than twice as powerful as each of the four engines that normally power the A340-300, according to Airbus officials.

Using a reactivated icing system that had been dormant since 1984, test crews injected an extremely fine water mist upstream of the engine to simulate specific types of clouds such as freezing fog the

engine might fly through or encounter when the aircraft is descending for a landing or waiting for take-off in very cold, foggy conditions, Mr. Duesterhaus said.

Test crews documented how ice formed and shed on the engine inlet.

Tom Schmade, an AEDC test project manager, said crews visually inspected the engine after each cloud test, using high-speed cameras. Test conditions simulated actual icing conditions the engine might experience while flying at altitudes up to 25,000 feet.

"When engines fly through these types of clouds, ice can build up on the aircraft affecting surfaces such as the wings," he said. "Ice can also build up on the engine face, break off and be ingested into the engine. The AEDC Icing System is used to verify the engine operates safely and reliably."

The icing test was part of an \$11 mil-

lion test program that validated the engine's performance and icing characteristics and completed the entire range of required Federal Aviation Association and European Joint Aviation Authorities performance criteria.

Following 97 hours of engine start and performance testing, the engine began a series of development tests to show it could operate safely during acceleration, deceleration and stall margins.

Crews tested the engine at simulated altitude conditions up to 43,000 feet and speeds up to Mach 0.98, or a little more than 700 mph.

According to Mr. Duesterhaus, the engine successfully met all performance criteria during the tests.

Following the test, the engine was shipped back to the Rolls-Royce facility in Derby, England.

'It's kind of like the Hulk'

Officials tell how center is transforming rather than changing

Jeanne Grimes
OC-ALC Public Affairs

According to one Air Force official, the transforming business of maintaining and repairing jet engines and aircraft at Tinker Air Force Base, Okla., is more like the Incredible Hulk than Superman.

"Clark Kent goes into a telephone booth and changes clothes and he's Superman; that's not transformation. The Hulk is transformation. The Hulk changes molecularly," Lt. Col. James Hannon said. "[Transformation] is not just moving the deck chairs and painting the floors. This is a major change of how we do business today."

Colonel Hannon, who heads the maintenance directorate's transformation office at the Oklahoma City Air Logistics Center at Tinker AFB, offered this comparison while explaining how the center is improving its shop floor work processes.

According to Colonel Hannon, workers are combining lean — the practice of understanding processes and identifying steps to eliminate waste — with a cellular methodology defined as a "product-focused process."

The result is "a very product-focused efficient process with minimal waste," he said.

"What we do will dramatically improve the quantity, the quality and the cost of the products we provide to the warfighter," he added.

Take, for example, the F100 shop. As the power plant for both the F-15 and F-16 fighters, the F100 is the biggest engine line at the ALC. When cellular methodology is in place, Col. Hannon said, most stages of repair from disassembly to repair and overhaul to assembly will be together in one business unit. No more, he foresees, will engine parts be shuffled between back shops.

"The majority of those back shop items are combined with the front shop function," he said. "So you have disassembly, cleaning and inspection, repair and refurb-



Engine mechanics James Knoles, back, and Greg Moeller get their hands on the first F119 engine to come to the Oklahoma City Air Logistics Center, Tinker AFB, Okla. The F119 is the powerplant for the F/A-22 Raptor. The OC-ALC is undergoing a major transformation effort that is changing the way maintaining and repairing jet engines, like the F119, and aircraft is done. (AF photo by Margo Wright)

ishment right next to planning, scheduling and parts support all in one shop."

Improvements in areas where lean and cellular are already incorporated have experienced an average of 50 percent gains, whether measured in flow days, amount of inventory, work in progress or throughput.

"Think how huge that is," Col. Hannon said. "If you can reduce the parts on the floor waiting in those batch and queue pockets ... you have an immediate reduction in cost. In addition, those parts are now in the warfighters' hands instead of sitting on a floor somewhere ... which is a direct readiness multiplier."

"The majority of the people I talk to, they like what's going on. They've seen the benefits and want some of these process improvement initiatives in their area, too, as quickly as possible," he continued.

Now Col. Hannon and his staff are "smack in the middle" of selecting approximately three finalists — large contractor teams — to develop both an over-

arching transformation plan for the maintenance directorate and an F100 business unit plan.

The final selection, added Toby Kaiser-Arnett, senior program manager, is scheduled for next June.

"That's when activity will occur on the shop floor," Ms. Kaiser-Arnett said. "Over 10 years, we're going to transform all operations — aircraft, engines and commodities — across 44 maintenance facilities spanning more than 6 million square feet of industrial space."

Cost of the 10-year transformation is projected at \$500 million. For every business unit completed, however, officials expect at least a 2:1 return on that investment in three to four years "if not sooner," Ms. Kaiser-Arnett said.

"Some of it will be one-time savings and some will be annual," she added.

"What we're doing will solidify Tinker as a world-class maintenance repair overhaul operation," Col. Hannon said.

"There's no doubt about it ... it's the right thing to do."

Mother of all displays

EGLIN AIR FORCE BASE, Fla. — The “Mother of All Bombs” is now on display outside the Air Force Armament Museum, Eglin Air Force Base, Fla.

A full-size replica of the MOAB, whose real and lesser-known name is Massive Ordnance Air Blast, was dedicated in a ceremony where the people who worked on the program reminisced about how quickly it entered the weapons inventory.

“It’s a thrill to be associated with this gargantuan weapon,” said Capt. Jess Drab who was the program manager for the MOAB during its early development in the Air Force Research Laboratory Munitions Directorate. “This is a testament to American ingenuity.”

The MOAB is the largest-ever satellite-guided, air-delivered weapon in history. The 21,600 pound bomb, an upgrade to the unguided 15,000-pound BLU-82



Within nine months, the “Mother of All Bombs” program went from development contract award to the completion of three highly successful flight tests. The MOAB is now on display outside the Air Force Armament Museum, Eglin AFB, Fla. (AF photo by Mike Fleck)

“Daisy Cutter,” carried 18,600 pounds of explosive to a predetermined target on an Eglin AFB bombing range with precise accuracy when it was tested.

“With Operation Iraqi Freedom looming, the secretary of defense authorized a limited production run of the MOAB,”

said Lt. Col. Mark Hunter, MOAB program liaison between AFRL and the Air Armament Center. “These weapons were never used in combat. However, they cast a long shadow over our enemies.”

— AAC Public Affairs

Space squadron says so long

EDWARDS AIR FORCE BASE, Calif. — Edwards Air Force Base, Calif., witnessed the end of an era July 1 as the 18th Space Control Squadron operationally inactivated.

The 18th SPCS’s mission was to provide optical space surveillance support to space command’s space control mission.

This included detecting, tracking, identifying and collecting special signatures of near space and deep space objects, according to Staff Sgt. Jason Jorgensen, NCOIC, 18th SPCS standardization/evaluation.

The 18th SPCS headquarters relocated to Edwards AFB in November 1994 and began official operations in February 2000. The optical command, control and communications facility provided staffing support and quality assurance management to more than 180 military people and contractors worldwide.

Additionally, the 24-hour operations facility scheduled tasking for all optical surveillance sensors and routed data back to the requesting organization, Sergeant Jorgensen said.

It’s mission will continue on through the Air Force’s four ground-based electro-optical deep space surveillance units located at Socorro, N.M.; Diego Garcia; Maui, Hawaii; and Moron Air Base, Spain.

— 95th ABW Public Affairs

Junior Force Study tour wraps up

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Air Force Materiel Command officials recently called on supervisors to make shaping the Air Force’s future leaders a top priority.

“We must work together, as top leadership, and front-line supervisors, to make a positive difference for the future,” said Gen. Gregory S. Martin, AFMC commander. “The junior force is the future. I am counting on each and every (supervisor) to work with me to improve development of our junior force.”

During a command-wide tour, leaders met with junior enlisted people, Air Force civilians and company grade officers to share the findings of a study titled *The Next Greatest Generation*, contracted out to the Pelletier Group.

The purpose of the study was to learn how the junior force feels about the work they are doing; and second, to make recommendations on how to improve their morale and increase retention.

“I asked the study participants to provide the Pelletier Group with honest, unvarnished opinions and observations about their concerns and their ideas as part of the Air Force and AFMC and they delivered,” General Martin said. “The study found that we were doing many things right but there is room for improvement.”

— AFMC Public Affairs



SOUTHWEST ASIA — Staff Sgt. Faniko Brown, 379th Expeditionary Communications Squadron telephone maintenance technician, maintains a telephone connection at a forward deployed location. Sergeant Brown, deployed from Eglin Air Force Base, Fla., is supporting war efforts in the Middle East. (AF photo by Tech. Sgt. Demetrius Lester)



AFMC

Warfighters



DESTINATION IRAQ — From left, Senior Airman Ellen Crytzer, Tech. Sgt. Andre Killkelley and Airman 1st Class Jacob Kaminski will be among the Airmen to go to Iraq. Here, they check under the hood of a 5 ton truck. (AF photo by Sue Sapp)

Lanorris Askew **WR-ALC Public Affairs**

Dodging bullets and mortar rounds in level four body armor isn't the daily routine for most vehicle operators in the 78th Logistics Readiness Squadron ... yet.

In a few months that will change when 21 vehicle operators from Warner Robins Air Force Base, Ga., head to the desert. Their mission will be to run combat convoy operations from city to city and base to base.

"This is the first time our folks have been tasked to do something of this sort," said Joe Trussell, vehicle management flight chief. "We're actually doing Army convoy taskings. While driving vehicles is their usual job, this time they'll be driving in a war zone."

To ensure they have the requisite combat skills, the Air Education and Training Command and the Department of the Army will provide a rugged six-week training course.

"When the first group went out they supplemented the Army by 60 percent. They are now well over 90 percent," said Master Sgt. James Muncy, vehicle operations superintendent. "In Air Force Materiel Command, Robins has been hit the hardest as far as how many bodies are going."

They know that the 179 days or more they spend in Iraq won't be a day at the beach and are prepared for the worst. "Some convoy movements can take up to a month to complete," said Sergeant Muncy.

"You don't have the luxury of going to work, working eight hours and then going to your tent, he added.

"We'll probably be living off MREs and one hot meal a day if we're lucky."

"It's the way our Army brothers and sisters live daily," said Sergeant Muncy. "What they're doing is taking Air Force GIs and converting them into Army soldiers. There has been a push for a joint force, and that's what this is all about."



A crew sets up film equipment, including lighting, cameras and a giant blue screen, around a B-1B Lancer before filming portions of an upcoming Air Force recruiting commercial. Edwards AFB has played a large part in production of the last four sets of recruiting commercials. (AF photo by Master Sgt. Christopher Ball)

And again... Lights... Camera... Action!

Master Sgt. Christopher Ball
95th ABW Public Affairs

Production is underway on the newest group of Air Force recruiting commercials, and once again Edwards Air Force Base, Calif., is getting a piece of the action.

This is the fourth time in as many sets of commercials that the production company, GSD&M, has selected Edwards AFB as a location for filming.

Daniel Russ, creative director, has been involved in the last four sets of Air Force recruiting commercials.

"We come to Edwards because most of the aircraft that we need are here," he said. "The Air Force leaders don't want 20- or 30-year-old aircraft in the commercials. They want the new stuff."

Mr. Russ used the F/A-22 Raptor and F-35 Joint Strike Fighter as examples of what they're looking for.

"And, the weather's always nice," he added.

Mr. Russ explained that another reason is the hangars at Edwards AFB allow for easy set-up of camera and lighting equipment, which can be a challenge at other places.

One part of filming these commercials that hasn't been a challenge, according to Mr. Russ, is working with the Air Force. He said it has been one of his best experiences with GSD&M.

"I like to describe Air Force members as exceptional people from average backgrounds," he said. "It's an awesome organization."

That organization has pulled resources from far and wide to create the commercials. One scene features a B-1B Lancer from Ellsworth AFB, S.D., and a pilot from Dyess AFB, Texas.

Previous commercials filmed at Ellsworth AFB featured a trio of stealth aircraft — a B-2 Spirit and two F-117 Nighthawks — refueling in flight, an F-16 Fighting Falcon with "How's my driving" on the tail and many base people.

One seldom-mentioned but just as vital Edwards AFB asset, the 20,000-square-mile R2508 flying area, will also be used in shooting the newest commercials, which are scheduled to air sometime after September 2004.

Standing on the job

A specially designed hydraulic chair and desk elevation system is putting Melanie McDonald in the right position for job success.

"It's not a new back, but it's the next best thing," said Mrs. McDonald. The speech writer for the Commander's Action Group at Robins Air Force Base, Ga., suffers from Degenerative Disk Disease and recently began using the nearly \$2,000 Plasma 2 System after months of trying to find a more comfortable way to do her mostly computer-based job duties.

"The way my work station was set up, the only way to do my job was to sit," she said. "It was suggested that I take frequent breaks, but that only worked if I wasn't under a tight deadline. I needed a set up where I could get my job done, but not have to sit all the time. With the Plasma 2 System, I can do that."

The Perry, Ga., native had surgery in November 2003 to repair a compressed nerve root and remove bone spurs and a ruptured disk in her spinal column. However, coming back to work presented a painful problem, she couldn't combat sitting down.

"I really wanted to work, but when you're in that mode where you're constantly in pain, it's a very depressing place to be," she said. "Now, I can do my job without hurting all the time. I can now come home and have some part of me left instead of being in survival mode where I'm giving my best through the work day and it's all I can do to get home and lay down and just try to recover for the next day."

And the speech writer said she gives much credit to the Department of Defense Computer Accommodations Program, the CAP office at Wright-Patterson AFB, Ohio, her office and the Ergonomic Work Group for providing the system she calls a "life saver."

At the touch of a button, Mrs. McDonald can go from sitting to standing with little physical effort, using the system's vertical seat and desk adjustments while maintaining firm back and arm support.

Renee Albright, client services manager for the CAP program at Wright-Patterson AFB, said with help from local ergonomic equipment vendors, her office can help more people like Mrs. McDonald serve the Air Force more productively.

Holly J. Logan
WR-ALC Public Affairs



Melanie McDonald, a speech writer at Robins AFB, Ga., uses a specially designed hydraulic chair and desk elevation system to help alleviate her back pain. (AF photo by Sue Sapp)

‘Foam girl’



Lockheed-Martin contractor Angie Drottz, Aerospace Maintenance and Regeneration Center, Davis-Monthan AFB, Ariz., custom makes ballistic foam inserts for Air Force A-10 Thunderbolt II aircraft to double their operational lifespan. Mrs. Drottz originally found that it would cost more than \$60,000 per wing to replace all of the inserts and decided that she could fabricate them herself for less than \$19,000 per wing. (AF photo by Tech. Sgt. Brian Davidson)

Tech. Sgt. Brian Davidson AMARC Public Affairs

In a small shop that sits in the Sonoran Desert, surrounded by thousands of aircraft sitting in neat rows, one dedicated aircraft mechanic has perfected an art that helps protect the lives of Air Force pilots flying combat missions in operations around the world.

Lockheed-Martin contractor Angie Drottz has developed a method to custom make ballistic foam inserts for Air Force A-10 Thunderbolt II aircraft as part of a project designed to double the aircraft's operational lifespan. Aerospace Maintenance and Regeneration Center officials at Davis-Monthan Air Force Base, Ariz., said this skill is so specialized, she is the only known Air Force maintainer with the ability to accomplish it.

The A-10 Service Life Extension Program uses structural modifications to strengthen stressed areas of the aircraft wings. It was during this modification process that Mrs. Drottz identified the need for new ballistic foam, and found that many of the foam inserts were either unavailable through the supply system or extremely expensive.

With research and determination, Mrs. Drottz, who has earned the nickname "Foam Girl," developed the skills to custom make each of the more than 100 foam inserts for the aircraft wings.

"The inserts are important because they help protect both the pilot and fuel cells when the aircraft is in combat," Mrs. Drottz said. "Each piece of foam is designed to help prevent explosions from small arms fire, anti-aircraft rounds and shrapnel, and that adds up to survivability."

During the upgrades of the first two A-10s, technicians re-used the ballistic inserts from aircraft that had retired from service, but after that, the inserts became scarce.

Mrs. Drottz found that it would cost more than \$60,000 per wing to replace all of the inserts, provided they were available. After much research and consideration, she decided that she could fabricate them herself-at a cost of less than \$19,000 per wing.

Ballistic foam is ordered in large blocks. Using specialized templates for each insert, as

well as saws and shapers she also custom made, Foam Girl goes to work at a small workbench, meticulously measuring, cutting and shaping as each piece takes form-custom fit for each wing compartment.

Just watching Mrs. Drottz sculpt the inserts makes many of the other technicians shake their head in wonderment at how she can match such odd shapes, sizes and angles so precisely.

"These ballistic foam inserts play an important part in the survivability of the aircraft," said Tech. Sgt. James Simmons, A-10 crew chief and proficiency instructor from the 649th Combat Logistics Support Squadron at Hill AFB, Utah.

"These inserts smother sparks and absorb the explosion when a projectile hits metal," Sergeant Simmons said. "It can prevent a catastrophic explosion in the wings and fuel cells. Just a few years ago, the inserts were difficult to find, and even today, when we do buy new inserts, they often have to be reshaped to fit."

As much an art as a science, Mrs. Drottz shapes each piece to meet the specific tolerances as defined in the air-

craft technical orders, as well as the strictest scrutiny — the scrutiny of the Foam Girl herself. "If it's not perfect, it doesn't go in the aircraft," she said.

Mrs. Drottz developed her aircraft maintenance skills as a child while working with her father, who maintained a crop-duster aircraft, and from her grandfather who taught her how to work with metals and tools.

After completing high school, she joined the Air Force and continued to refine her craft for more than seven years as an aircraft structural mechanic.

Mrs. Drottz plans to continue her work at AMARC and eventually find a position in civil service as an aircraft specialist.

AMARC has nearly 900 Depot Maintenance Activity Group employees with the unique and specialized skills and knowledge needed to maintain more than 70 different types of aircraft.

As part of Air Force Materiel Command, AMARC is a specialized center with a mission to provide aerospace maintenance and regeneration to its customers and for the sustainment of the warfighter.

Angie Drottz, or "Foam Girl," custom fits a foam insert for an A-10 Thunderbolt II wing. The inserts can prevent a catastrophic explosion in the wings and fuel cells by smothering sparks and absorbing explosions. Mrs. Drottz is the only known Air Force maintainer with the ability to accomplish her unique mission. (AF photo by Tech. Sgt. Brian Davidson)





60177

In a moment of solitude as the sun rises at U'taphao International Airport, Thailand, May 28, 2004, Maj. Gen. Ed Mechenbier contemplates the next leg of an historic mission — the two-hour flight to Hanoi, Vietnam, to take custody of the remains of two American MIAs, missing for more than 30 years. The last time he was in Vietnam was the day of his release from the infamous "Hanoi Hilton" POW camp, February 18, 1973. Then 1st Lt. Mechenbier had been a prisoner-of-war for nearly six years. The aircraft he piloted to Hanoi on May 28, a C-141 Starlifter with Tail #60177, was the first aircraft to fly released prisoners out of Vietnam. The POWs gave the aircraft the nickname of "Hanoi Taxi."

AFMC